WHAT IS CLAIMED IS:

1. A thermosensitive flow rate detecting device comprising:

a heat generating resistor provided in fluid to be measured for generating heat by electric power consumed in accordance with a flow rate of the fluid to be measured;

a first temperature detecting resistor for detecting a temperature of the fluid to be measured which changes in accordance with the flow rate; and

a second temperature detecting resistor for detecting the temperature of said heat generating resistor,

further comprising a bridge circuit provided with said first temperature detecting resistor and said second temperature detecting resistor, the heating current of said heat generating resistor being controlled such that a temperature difference between said first temperature detecting resistor and said second temperature detecting resistor is kept constant, and the flow rate within the fluid to be measured being detected by using the heating current,

wherein a voltage in proportion to the heating current of said heat generating resistor is applied to said bridge circuit.